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PTO/SB/21 (05-03)  
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/854,083
Filing Date	May 11, 2001
First Named Inventor	Tan, Zhengquan
Art Unit	2823 /
Examiner Name	William D. Coleman
Attorney Docket Number	A5771/T42200

Total Number of Pages in This Submission

### ENCLOSURES (Check all that apply)

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Amendment/Reply
  - ☒ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/Incomplete Application
- ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)

- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s)  
(please identify below):
  - Copy of the Office Action for 08/616,707 (USP 6,001,728) dated 5/11/98.
  - Copy of U.S. Patent No. 6,001,728
  - Postcard.

Remarks

The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Townsend and Townsend and Crew LLP
	William L. Shaffer Reg. No. 37,234
Signature	
Date	

### CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	Kristina Alvarez
Signature	
Date	7/21/03

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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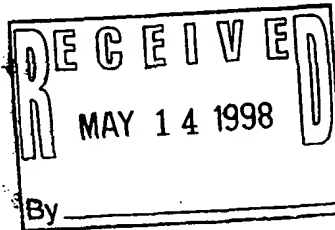
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APPLICATION NO. 08/616,787	FILING DATE 03/15/96	FIRST NAMED INVENTOR BHAN	ATTORNEY DOCKET NO. 1310/POD
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MM31/0511

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EXAMINER WHIPPLE M
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ART UNIT 2513	PAPER NUMBER
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05/11/98

DATE MAILED:

OFC 8-4  
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Please find below and/or attached an Office communication concerning this application r proceeding.

Commissioner of Patents and Trademarks

**COPY**

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**C.C. DOCKETING**

**Office Action Summary**Application No.  
**08/616,707**Applicant(s)  
**Bhan et al.**Examiner  
**Matthew Whipple**Group Art Unit  
**2813**☒ Responsive to communication(s) filed on Aug 14, 1997☐ This action is **FINAL**.☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**☒ Claim(s) 1-26 is/are pending in the application.Of the above, claim(s) 20-26 is/are withdrawn from consideration.☐ Claim(s) \_\_\_\_\_ is/are allowed.☒ Claim(s) 1-19 is/are rejected.☐ Claim(s) \_\_\_\_\_ is/are objected to.☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.**Application Papers**☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.☐ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. § 119**☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).**Attachment(s)**☒ Notice of References Cited, PTO-892☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6☐ Interview Summary, PTO-413☒ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit:

## DETAILED ACTION

### *Election/Restriction*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-19, drawn to a process, classified in class 438, subclass 784.

II. Claim 20, drawn to a product, classified in class 257, subclass 632.

III. Claims 21-26, drawn to an apparatus, classified in class 118, subclass 723.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product may be made by another method such as with a single frequency plasma reactor.

3. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus may be used to practice another process, such as for forming an undoped oxide layer.

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- ✓4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
- ✓5. During a telephone conversation with William Shaffer on 4/20/98 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
- ✓6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

### *Specification*

- ✓7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

- (a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to

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enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

(c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because it does not provide written support for claims 13-16 and 19. These claims require that both SiF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub> be used, where the specification only teaches that one or the other is used.

### *Claim Rejections - 35 USC § 112*

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 13-16 and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims require that both SiF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub> be used, where the specification only teaches that one or the other is used.

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*Claim Rejections - 35 USC § 102*

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. Claims 1-4, and 13 are rejected under 35 U.S.C. 102(e) as anticipated by U.S. Patent 5,571,571 (Musaka et al.).

Musaka et al. teach a dual frequency PECVD process using TEOS, O<sub>2</sub>, He, and C<sub>2</sub>F<sub>6</sub> at a pressure of about 5 torr. Frequencies of 13.56 MHZ and 400 KHz are taught. (col. 6, lns. 15-25). The helium flow rate is 400 sccm and the TEOS flow is 80 sccm, which is a ratio of 5:1. The process results in a silicon oxide film containing greater than 2.5 atomic percent fluorine (col. 9, lns. 5-10). Because the process conditions are entirely similar to applicant's conditions set forth on page 12 of applicant's disclosure, including the claimed TEOS:He ratio, plasma frequencies and pressures, the film would inherently be stable up to 400° C. Furthermore, the claim does not set forth how stable the film must be, so that any degree of stability would read on applicant's limitation.

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NOTE that the rejection of claim 13 is only made in the event that applicant intended only C2F6 be used as a fluorine source, as is disclosed in the specification.

*Claim Rejections - 35 USC § 103*

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. as applied to claim 1 above, and further in view of the article "Dual frequency plasma CVD fluorosilicate glass water absorption and stability" (Shapiro et al.).

Musaka et al. do not teach using SiF<sub>4</sub>.

However, Shapiro et al. teach that SiF<sub>4</sub> provides a more stable film than C2F<sub>6</sub>.



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Therefore, it would have been obvious to one of ordinary skill in the art to substitute SiF<sub>4</sub> for C<sub>2</sub>F<sub>6</sub>, as taught by Shapiro et al..

14. Claims 6-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. in view of Shapiro et al. as applied to claim 5 above, and further in view of Silicon Processing for the VLSI Era, vol. 2 (Wolf).

Applicant's temperatures are not taught.

However, Wolf teaches that low temperature TEOS PECVD deposition is performed at 375° C (pg. 198, section 4.3.2.4).

Furthermore, it has been held that optimization is obvious (see *In re Aller* 105 USPQ 233 (CCPA 1955)).

Therefore, it would have been obvious to one of ordinary skill in the art to choose temperatures within applicant's ranges because Wolf teaches that such temperatures are well known for PECVD TEOS processes, according to the precedent set by *In re Aller*.

15. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. in view of Shapiro et al. and Wolf as applied to claim 7 above, and further in view of U.S. Patent 5,068,124 (Batey et al.).

Musaka et al. do not teach applicant's flow rates.

Batey et al. teach that high helium flow rates of 2000 sccm or greater may be used to insure uniformity, high quality oxides, and high deposition rates (see col. 2, lns. 5-6 and Summary).

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Furthermore, it has been held that optimization of a result effective variable is obvious (see *In re Huang* 40 USPQ2d 1685 (Fed. Cir. 1996)).

Therefore, it would have been obvious to choose applicant's high flow rates for the reasons given by Batey et al., according to the precedent set by *In re Huang*.

16. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. in view of Shapiro et al. and Wolf as applied to claim 6 above, and further in view of the article "The Effect of O<sub>2</sub>:C<sub>2</sub>F<sub>6</sub> ratios and low frequency power on the gap fill properties and stability of F-TEOS films" (Carl et al.).

Applicant's low frequency power is not taught.

However, the low frequency power has been shown to effect the gap fill and stability properties of F-TEOS films, as taught by Carl et al. (Abstract).

Therefore, it would have been obvious to optimize the low frequency power and frequency for the reasons given by Carl et al. and because overlapping low frequencies are taught (Musaka et al., col. 4, lns. 55-60) and according to the precedent set by *In re Huang* and *In re Aller supra*.

17. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. as applied to claim 1 above, and further in view of Chakravarti et al..

NOTE that this rejection to claim 13 is made alternatively to the 35 USC 102 rejection above in the case that applicant intended to claim that both SiF<sub>4</sub> and C<sub>2</sub>F<sub>6</sub> be used together as fluorine source gases, which would be considered a difference from the prior art.

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However, Chakravarti et al. teach that one or more of such fluorine source gases may be used (see col. 3, lns. 6-12 and 25-30 and Fig. 1).

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Furthermore, it has been held that it is *prima facie* obvious to combine <sup>two</sup>~~two~~ compositions each of which is taught by the prior art to be used for the same purpose, in order to form a third composition to be used for the very same purpose . . . [T]he idea of combining them flows logically from their having been individually taught in the prior art. See *In re Kerkhoven*, 626 F.2d 846, 205 USPQ 1069, 1072 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use both C<sub>2</sub>F<sub>6</sub> and SiF<sub>4</sub> in combination because Chakravarti et al. teach that it is known to do so and because both are known for the same purpose of supplying fluorine so that combining them would be obvious according to *In re Kerkhoven* and because it would allow better control of both the deposition rate and the fluorine concentration.

18. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. as applied to claim 13 above, and further in view of Wolf, or alternatively Musaka et al., Wolf and Chakravarti et al..

Applicant's temperatures are not taught.

However, Wolf and *In re Aller* is applied as above.

19. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. in view of Wolf and alternatively Chakravarti et al. as applied to claim 15 above, and further in view of Batey et al..

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Applicant's helium flows are not taught

However, Batey and *In re Huang* are applied as above.

Musaka et al. further does not teach using first an second helium sources and using the helium as a carrier gas for TEOS.

However, Batey et al. teaches that the helium should be introduced both as a carrier gas for the silicon reactant (col. 3, lns. 9-15 and 23-25) and separately from the other gases (col. 4, lns. 1-5), which allows for adjusting the silicon source gas flow while allowing for a large helium flow rate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Batey et al. to the Musaka et al. reference to allow for a large flow rate of helium gas with freedom to adjust the flow rate of the silicon source gas and because Batey et al. teach that the teachings apply for any silicon source gas (col. 3, lns. 23-25).

20. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Musaka et al. or alternatively Musaka et al. in view of Chakravarti et al. as applied to claims 1 and 13 above, and further in view of U.S. Patent 5,456,796 (Gupta et al.).

Musaka et al. do not teach maintaining the flow of helium after deposition.

However, Gupta et al. teach that after processing a substrate in a PECVD reactor, the reactants used during the processing should be removed from the chamber, which is then filled with inert gas such as helium. The plasma should be maintained during this time. The particles are then moved away from the wafer and the plasma is extinguished. The particles than drop due

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to gravitational forces and the application of gas flow and are exhausted from the chamber. ( See col. 6, ln. 61 to col. 7, ln. 10 and col. 7, lns. 28-34).

Therefore, it would have been obvious to maintain the helium gas flow after deposition and after the plasma is extinguished, as taught by Gupta et al., to remove particles from the chamber and prevent contamination of the substrate.

Then the only difference is that the exact time for maintaining the gas flow is not taught.

However, it would have been obvious to choose applicant's times to insure the removal of particulates from the chamber, according to the precedent set by *In re Huang supra*.

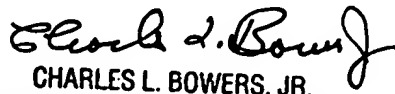
***Pertinent Prior Art***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 5,571,578 (Kaji et al.) also teaches dual frequency with applicant's TEOS to helium gas ratio (see col. 4, lns. 15-30).

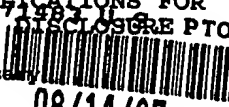
22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Whipple whose telephone number is (703) 308-2521.

MLW

May 1, 1998

  
CHARLES L. BOWERS, JR.  
SUPERVISORY PATENT EXAMINER  
GROUP 1100

<b>FORM PTO-1449 (Modified)</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE PTO STATEMENT</b> (Use several sheets if necessary)				<b>Attorney Docket No.</b> AM1310/T11800		<b>Serial No.:</b> 08/616,707	
<b>Applicant:</b> Mohan Krishan Bhan, et al.				<b>Filing Date:</b> March 15, 1996		<b>Group:</b> Unassigned	


  
 08/14/97

Reference Designation						
U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
AA	4,894,352	01/16/90	Lane et al.	437	238	10/26/88
AB	5,045,346	09/03/91	Tabasky et al.	427	39	07/31/90
AC	5,413,967	05/09/95	Matsuda et al.	437	235	05/03/95
AD						
AE						
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FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
AM						
AN						
AO						
AP						
AQ						

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
AR	Musaka et al., Single Step Gap Filling Technology for Subhalf Micron Metal Spacings on Plasma Enhanced TEOS/O <sub>2</sub> Chemical Vapor Deposition System, Extended Abstracts of the 1993 International Conference on Solid State Devices and Materials, Makuhari, 1993, pp. 510-512.
AS	
AT	

EXAMINER <i>MAH</i>	DATE CONSIDERED	4/27/98
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# **NOTICE OF DRAFTPERSON'S PATENT DRAWING REVIEW**

The drawing filed (insert date) 05/16/97 are:

A. ☒ not objected to by the Draftperson under 37 CFR 1.84 or 1.152.

B. ☐ objected to by the Draftperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings where necessary. Corrected drawings must be submitted according to the instructions on the back of this notice.

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| <p><b>1. DRAWINGS.</b> 37 CFR 1.84(a): Acceptable categories of drawings:<br/>         Black ink. Color.<br/>         _____ Color drawing are not acceptable until petition is granted.<br/>         Fig.(s) _____<br/>         _____ Pencil and non black ink is not permitted. Fig(s) _____</p> <p><b>2. PHOTOGRAPHS.</b> 37 CFR 1.84(b)<br/>         _____ Photographs are not acceptable until petition is granted.<br/>         _____ 3 full-tone sets are required. Fig(s) _____<br/>         _____ Photographs not properly mounted (must bristol board or photographic double-weight paper). Fig(s) _____<br/>         _____ Poor quality (half-tone). Fig(s) _____</p> <p><b>3. TYPE OF PAPER.</b> 37 CFR 1.84(e)<br/>         _____ Paper not flexible, strong, white and durable.<br/>         Fig.(s) _____<br/>         _____ Erasures, alterations, overwritings, interlineations, folds, copy machine marks not acceptable. (too thin)<br/>         _____ Mylar, vellum paper is not acceptable (too thin).<br/>         Fig(s) _____</p> <p><b>4. SIZE OF PAPER.</b> 37 CFR 1.84(f): Acceptable sizes:<br/>         _____ 21.0 cm by 29.7 cm (DIN size A4)<br/>         _____ 21.6 cm by 27.9 cm (8 1/2 x 11 inches)<br/>         _____ All drawings sheets not the same size.<br/>         Sheet(s) _____</p> <p><b>5. MARGINS.</b> 37 CFR 1.84(g): Acceptable margins:<br/>         Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm<br/>         SIZE: A4 Size<br/>         Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm<br/>         SIZE: 8 1/2 x 11<br/>         _____ Margins not acceptable. Fig(s) _____<br/>         _____ Top (T) _____ Left (L)<br/>         _____ Right (R) _____ Bottom (B)</p> <p><b>6. VIEWS.</b> CFR 1.84(h)<br/> <b>REMINDER:</b> Specification may require revision to correspond to drawing changes.<br/>         _____ Views connected by projection lines or lead lines.<br/>         Fig.(s) _____<br/> <b>Partial views.</b> 37 CFR 1.84(h)(2)<br/>         _____ Brackets needed to show figure as one entity.<br/>         Fig.(s) _____<br/>         _____ Views not labeled separately or properly.<br/>         Fig.(s) _____<br/>         _____ Enlarged view not labeled separately or properly.<br/>         Fig.(s) _____</p> | <p><b>7. SECTIONAL VIEWS.</b> 37 CFR 1.84(h)(3)<br/>         _____ Hatching not indicated for sectional portions of an object.<br/>         Fig.(s) _____<br/>         _____ Sectional designation should be noted with Arabic or Roman numbers. Fig.(s) _____</p> <p><b>8. ARRANGEMENT OF VIEWS.</b> 37 CFR 1.84(i)<br/>         _____ Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned, so that the top becomes the right side, except for graphs. Fig.(s) _____<br/>         _____ Views not on the same plane on drawing sheet. Fig.(s) _____</p> <p><b>9. SCALE.</b> 37 CFR 1.84(k)<br/>         _____ Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction.<br/>         Fig.(s) _____</p> <p><b>10. CHARACTER OF LINES, NUMBERS, &amp; LETTERS.</b> 37 CFR 1.84(l)<br/>         _____ Lines, numbers &amp; letters not uniformly thick and well defined, clean, durable and black (poor line quality).<br/>         Fig.(s) _____</p> <p><b>11. SHADING.</b> 37 CFR 1.84(m)<br/>         _____ Solid black areas pale. Fig.(s) _____<br/>         _____ Solid black shading not permitted. Fig.(s) _____<br/>         _____ Shade lines, pale, rough and blurred. Fig.(s) _____</p> <p><b>12. NUMBERS, LETTERS, &amp; REFERENCE CHARACTERS.</b> 37 CFR 1.48(p)<br/>         _____ Numbers and reference characters not plain and legible.<br/>         Fig.(s) _____<br/>         _____ Figure legends are poor. Fig.(s) _____<br/>         _____ Numbers and reference characters not oriented in the same direction as the view. 37 CFR 1.84(p)(3) Fig.(s) _____<br/>         _____ English alphabet not used. 37 CFR 1.84(p)(3) Fig.(s) _____<br/>         _____ Numbers, letters and reference characters must be at least .32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig.(s) _____</p> <p><b>13. LEAD LINES.</b> 37 CFR 1.84(q)<br/>         _____ Lead line: cross each other. Fig.(s) _____<br/>         _____ Lead lines missing. Fig.(s) _____</p> <p><b>14. NUMBERING OF SHEETS OF DRAWINGS.</b> 37 CFR 1.48(t)<br/>         _____ Sheets not numbered consecutively, and in Arabic numerals beginning with number 1. Fig.(s) _____</p> <p><b>15. NUMBERING OF VIEWS.</b> 37 CFR 1.84(u)<br/>         _____ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig.(s) _____</p> <p><b>16. CORRECTIONS.</b> 37 CFR 1.84(w)<br/>         _____ Corrections not made from PTO-948 dated _____</p> <p><b>17. DESIGN DRAWINGS.</b> 37 CFR 1.152<br/>         _____ Surface shading shown not appropriate. Fig.(s) _____<br/>         _____ Solid black shading not used for color contrast.<br/>         Fig.(s) _____</p> |
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COMMENTS

REVIEWER LAM

DATE

05/01/98 TELEPHONE NO. \_\_\_\_\_

<b>Notice of References Cited</b>				Application No. <b>08/616,707</b>		Applicant(s) <b>Bhan et al.</b>	
				Examiner <b>Matthew Whipple</b>		Group Art Unit <b>2813</b>	

U.S. PATENT DOCUMENTS						
	DOCUMENT NO.	DATE	NAME		CLASS	SUBCLASS
A	5,643,640	7/97	Chakravarti et al.		427	578
B	5,637,190	6/97	Liao		438	905
C	5,571,578	11/96	Kaji et al.		427	579
D	5,571,571	11/96	Musaka et al.		427	574
E	5,456,796	10/95	Gupta et al.		438	905
F	5,068,124	11/91	Batey et al.		427	39
G						
H						
I						
J						
K						
L						
M						

FOREIGN PATENT DOCUMENTS						
	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS		
	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U	Shapiro et al., "Dual frequency plasma CVD fluorosilicate glass water absorption and stability", DUMIC Conference, Feb. 21-22, 1995, pp 118-123.	2/1995
V	Carl et al. "The Effect of O <sub>2</sub> :C <sub>2</sub> F <sub>6</sub> ratios and two frequency power on the gap fill properties and stability of F-TEOS films", DUMIC Conference, Feb. 21-22, 1995, pp. 234-240.	2/1995
W	Wolf, Stanley, Silicon Processing for the VLSI Era, vol. 2, pp. 198-199 (1990).	1990
X		